

November 30, 1935

PUBLICATIONS COVERING NBS WORK ON SPARK PLUGS

This letter circular is a list of technical papers on spark plugs and their components by members of the staff of the National Bureau of Standards. These papers cover in particular the development of American spark plug porcelains and laboratory methods of testing spark plugs. This work was done in 1917-1920 with support from the National Advisory Committee for Aeronautics and with the cooperation of the industry. Experimental work on the testing of spark plugs recently was resumed and a Federal Specification covering unshielded spark plugs with insulators of material other than mica is now in preparation. This specification is to be known as W-P-506 (Plugs, Spark) and copies will be obtainable after promulgation from the Superintendent of Documents, Government Printing Office, Washington, D. C.

For convenience, the publications cited are designated by the following abbreviations:

- (T) - Technologic Paper, National Bureau of Standards.
- (NACA) - Technical Report, National Advisory Committee for Aeronautics.
- (J) - Journal of the American Ceramic Society.

The publication marked with an asterisk can be obtained at the price indicated from the Superintendent of Documents, Government Printing Office, Washington, D.C. The remaining Government publications are out of print but can usually be consulted at leading libraries.

Papers in technical journals must be consulted at libraries or obtained from the publishers, as the Bureau can not supply copies of these journals or reprints from them. The Journal of the American Ceramic Society is obtainable from the Society at 2525 N. High St., Columbus, Ohio.

1. Bleining, A.V. and Riddle, F.H. Note on certain characteristics of porcelain. (J) vol. 1, No. 10, p. 697 (1918).
2. Bleining, A.V. and Riddle, F.H. Special spark plug porcelains. (J) vol. 2, No. 7, p. 564 (1919).
3. Wright, J.W. and Sewell, S.I. Some physical properties of American porcelain bodies. (J) vol. 2, No. 4, p. 282 (1919).

4. Riddle, F.H. Relation between the composition and the thermal expansivity of porcelain. (J) vol. 2, No. 10, p. 804 (1919).
5. Silsbee, F.B. Causes of failures of spark plugs. (NACA) No. 51, part I (1919).
6. Loeb, L.B., Sawyer, L.G. and Fonseca, E.L. Gas leakage in spark plugs. (NACA) No. 51, part II (1919).
7. Dickinson, H.C., Silsbee, F.B. and Agnew, P.G. Methods for testing spark plugs. (NACA) No. 51, part III (1919).
8. Cragoe, C.S. Temperatures in spark plugs having steel and brass shells. (NACA) No. 52 (1919).
9. Silsbee, F.B. and Honaman, R.K. Methods of measuring resistance of insulators at high temperatures. (NACA) No. 53, part I (1919).
10. Honaman, R.K. and Fonseca, E.L. Electrical resistance of various insulating materials at high temperatures. (NACA) No. 53, part II (1919).
11. Bleininger, A.V. Preparation and composition of ceramic bodies for spark plug insulators. (NACA) No. 53, part III (1919).
12. Staley, H.F. Cements for spark plug electrodes. (NACA) No. 53, part IV (1919), also (T) No. 155 (1920).
13. Riddle, F.H. Further studies on porcelain. (J) vol. 2, No. 10, p. 812 (1920).
- *14. Rawdon, H.S. and Krynitzky, A.I. A study of the deterioration of nickel spark plug electrodes in service. (T) No. 143 (1920) (price 10 cents).

Note: NACA Technical Reports 51 to 53 are contained in the 5th Annual Report of the National Advisory Committee for Aeronautics.